

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011300**Date Inspected:** 27-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:****Yes No****Inspected CWI report:** **Yes No N/A****Rod Oven in Use:** **Yes No N/A****Electrode to specification:** **Yes No N/A****Weld Procedures Followed:** **Yes No N/A****Qualified Welders:** **Yes No N/A****Verified Joint Fit-up:** **Yes No N/A****Approved Drawings:** **Yes No N/A****Approved WPS:** **Yes No N/A****Delayed / Cancelled:** **Yes No N/A****Bridge No:** 34-0006**Component:** Deck Panel**Summary of Items Observed:**

Bridge No. 34-0006 Component: Deck Panels

Summary of Items Observed: On this day Caltrans OSM Quality Assurance (QA) Inspector Gary Richmond was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed and/or found the following:

On this date QA Inspector Gary Richmond gathered information compiled by the PAUT inspectors, regarding testing and inspections performed on Lifts 11 and 12 Deck Panels. This information was input into the master folders kept on the Caltrop "Team China" Z drive.

On this date QA Inspector Gary Richmond performed in-process inspections on the fit-up and welding of U-Rib stiffeners in Bay 9, in accordance with WPS-B-T-2342-U5.

On this date QA Inspector Gary Richmond performed in-process inspections on the fit-up and welding of U-Ribs to Deck Plate in Bay 9, in accordance with WPS-B-T-2342-U1.

The QA inspector performed conventional Ultrasonic (UT) Inspection on Deck Panel tack weld areas. The

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## WELDING INSPECTION REPORT

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inspection is preliminary prior to using the Phased Array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. The QA inspector performed UT on Deck Panel DP3003-001, 4 ribs, 8 welds, 248 total tack welds inspected.

Weld 1 scanned 31 locations with 0 indications.

Weld 2 scanned 31 locations with 1 indication.

Weld 3 scanned 31 locations with 1 indication.

Weld 4 scanned 31 locations with 1 indication.

Weld 5 scanned 31 locations with 2 indications.

Weld 6 scanned 31 locations with 0 indications.

Weld 7 scanned 31 locations with 1 indication.

Weld 8 scanned 31 locations with 1 indication.

QA Inspector performed initial Phased Array Ultrasonic Testing (PAUT) following the guide lines of UT procedure titled "Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds, # UT 04-0120F4 PJP Rib Weld" after conventional UT was performed on tack welded areas of the Partial Joint Penetration (PJP) welds joining U-Ribs to Deck Plate. The Deck Panels examined are as follows:

DP3003-001: 241 tack weld locations found compliant and 7 tack weld locations found non-compliant.

Tack weld locations found non-compliant are marked on U-Rib and Deck Plate for ZPMC's reference for repair. See Caltrans U-rib to Deck Panel- Tack Weld Assessment sheets dated 27th October, 2009 for further information on PAUT inspections.

### Summary of Conversations:

No relevant conversations noted.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Richmond, Gary
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Carreon, Albert
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QA Reviewer
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